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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/548,637	04/13/2000	John R Koza	50291.P009	6771

7590 10/30/2009
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EXAMINER

WONG, LUT

ART UNIT	PAPER NUMBER
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2129

MAIL DATE	DELIVERY MODE
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10/30/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/548,637	Applicant(s) KOZA ET AL.	
	Examiner LUT WONG	Art Unit 2129	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 13-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 13-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action is responsive to an RCE AMENDMENT entered 9-21-2009 for the patent application 09/548637.

The office action of 4-20-2009 is fully incorporated into this office action by reference.

Status of Claims

Claims 1-6, 13-23 are pending. Claims 1, 22-23 have been amended.

Record keeping

Drawing objection is maintained.

Claim Rejections - 35 USC § 101

Claim 23 is rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as set forth in the previous office action for reason of record.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

In re pg. 9, applicant submits that the spec has been amended to further define a "computer-readable storage medium"; therefore claim 23 is directed to statutory subject matter.

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In response, the rejection is maintained. The amendment fails to further define “computer-readable storage medium”.

Page 33 of the spec, amended on 9-21-2009, is reproduced below:

A **computer-readable storage medium** includes any mechanism for storing or transmitting information in a form readable by a machine (e.g., a computer). For example, a **computer-readable medium** includes read only memory ("ROM"); random access memory ("RAM"); magnetic disk storage media; optical storage media; flash memory devices; etc. –

It is readily clear that “computer-readable storage medium” still encompass non-statutory medium that transmit signals.

Note: the further defined medium is “computer-readable medium”, not “computer-readable storage medium”.

Claim Rejections - 35 USC § 103

Claims 1-6, 12-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over applicants' admitted prior arts (APA) by **Koza** et al, (US 5867397) and in view of another APA (**Ullman**, J.R) as set forth in the previous office action.

Response to Arguments

Applicant's arguments have been fully considered but they are not persuasive.

Note: the only amendment being made is cancellation of limitation “that avoid at least one characteristic in the reference structure”. Such limitation is merely an intended result and was not given patentable weight (See previous office action pgs. 4-5). As such, the claim scope has not been changed in this amendment. Therefore, same ground of rejection is being made and maintained.

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In re pgs. 10-11, applicant argues

Applicant respectfully disagrees. Although the Koza '397 patent discloses certain techniques for designing structures using genetic programming; however, the Koza '397 patent fails to disclose or suggest the limitations set forth above, particularly, using genetic programming techniques to fine tune a structure to both satisfy a predetermined design requirement and avoid key characteristics of a preexisting structure. Koza '397 describes genetic programming techniques that create design that can encompass characteristics of a reference structure. On the other hand, the claims of present application recite in part iterative genetic programming operations where the end result structure does not possess key characteristics of a reference structure. Thus, the key characteristics of the reference structure are actively avoided in the present application while in Koza '397, the key characteristics of the reference structure are not actively avoided. (See also, Specification, page 13, lines 14-20).

There is no disclosure or suggestion within the Koza '397 patent regarding the limitations as claimed in the present application. Thus, one with ordinary skill in the art, based on the teachings of the Koza '397 patent, would not be able to conceive the limitations as claimed in the present application.

Even if the Koza '397 patent were combined with the Ullman reference, such a combination still lacks the limitations set forth above, particularly, using genetic programming techniques to create and fine tune a structure that satisfies a predetermined design requirement and at the same time avoids key characteristics of an existing reference structure. Again, any suggestion for combining the Koza '397 patent and the Ullman reference can only be found based on the impermissible hindsight of Applicant's own disclosure. Therefore, for reasons set forth above, it is respectfully submitted that the present invention as claimed is patentable over the Koza '397 patent and the Ullman reference.

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In essence, the applicant argues one of ordinary skill in the art would not be able to conceive the limitation of "novel design". Even if one could, it would be based on hindsight reasoning.

In response, the Examiner disagrees.

1) The Examiner maintains the position that one of ordinary skill in the art whom is aware of "novelty design" would immediately motivated to added another variable in the objective function or fitness measure to obtain a predictable result of "creating novel design".

2) Such reasoning is not hindsight. Rather, it is based on common knowledge that is well known to one skill in the art. Should the applicant insists, perhaps the applicant can point to a specific section of the spec to show it is a hindsight reasoning. In other words, where in the spec mentions one skill in the art could/would not be able to conceive "novel design"?

3) To the contrary, the Examiner can presents evidence that one skill in the art would/could have modified the teaching of Koza '397 to achieve predictable result of "novel design". See Thompson et al for example.

Examiner Note:

The Examiner attempted compact prosecution by looking for allowable subject matter in the spec. However, no allowable subject matter is found at this point.

Pertinent prior art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Thompson et al ("Explorations in design space: Unconventional electronics design through artificial evolution" 1999) teaches using Evolutionary Algorithm to find new useful designs. See abstract and section c in particular.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LUT WONG whose telephone number is (571)270-1123. The examiner can normally be reached on M-F 7:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vincent David can be reached on (571) 272-3080. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Lut Wong/
Examiner, Art Unit 2129
/David R Vincent/

Supervisory Patent Examiner, Art Unit 2129